A NEW VARIETY OF *OXALIS IMBRICATA* E. & Z. WITH NOTES ON THE CONFUSION BETWEEN *O. IMBRICATA* AND *O. ZEEKOEVLEYENSIS* R. KNUTH.

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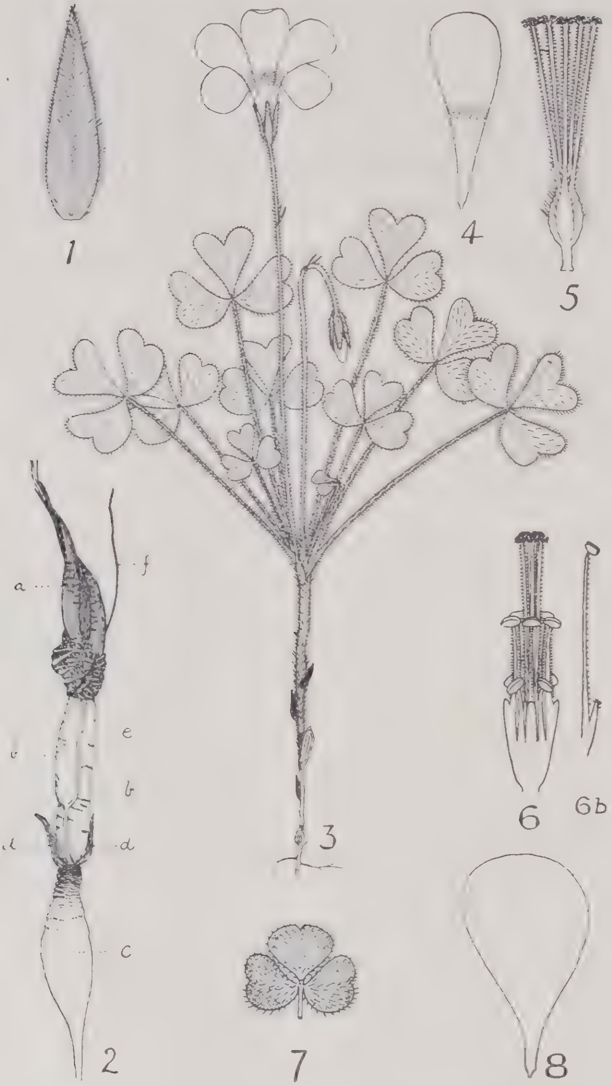
O. imbricata E. & Z., var. **cuneifolia** Salter, var. nov. A forma typica differt :—*Planta* valde caespitosa. *Caulis* semper exsertus. 2—4 cm. longus, dense pilosus. *Foliolum* medianum cuneatum, ad 1 cm. longum, 0·9 cm. latum, utrinque pilosum, apice conspicue incisum, lateralia obliqua, minora. *Filamenta* longiora brevissime dentata. *Corollae* tubus angustior, in faucibus saturate purpureus : petala cuneata, lamina roseo-purpurea. Fig. 1.

Hab. Cape Province : Riversdale—Mossel Bay Divs., near Gouritz River Bridge, *Pillans* 6654 (*type* in Bolus Herbarium), *Salter* 2378.

This well-marked variety has only been observed in the locality given. It differs from the typical form in always having an exserted stem, in its longer leaflets, the medial being cuneate and conspicuously incised at the apex, in the very shortly toothed filaments and in the narrower petals and purplish eye in the throat of the corolla tube. The shapes of the leaf and petal of the typical form are shown in Fig. 1, 7 and 8 and the tooth on the filament at 6*b*.

The imbrication or massing of the bulbs, which apparently suggested the trivial name *imbricata*, is particularly pronounced in the case of var. *cuneifolia*. The system of increase in the bulbs is shown in Fig. 1, 2. Two or three new bulbs (*b*, *b*) commence to form in the exhausted current year's bulb (*a*) and are dragged down on the intercalary prolongation of the rhizome (*e*) by the soft fleshy contractile root (*c*), which also acts as a water storage organ. The old, or previous year's intercalary growth (*f*) often persists, becoming tough and wiry. The result is that eventually a dense tuft of plants is formed and the tangled interwoven mass of bulbs is difficult to separate. Bulbils are very rarely produced on the rhizome *above* the bulb in this species.

O. imbricata and its variety *violacea* R. Knuth have not hitherto been fully or accurately described and Sonder confused the variety with another species, superficially very much like it, which has since been named *O. zeekoevleyensis* R. Knuth. The latter species is common in



F IG. 1. *O. imbricata* E. & Z., var. *cuneifolia* Salter. 1. Sepal × 5. 2. Bulb natural size: (*a*) current year's bulb, (*b,b*) new bulbs forming, (*c*) contractile root, (*d,d*) exhausted nutritive scales, (*e*) intercalary prolongation of the rhizome, (*f*) ditto, dead and persisting from the previous year. 3. Plant, natural size. 4. Petal × 1½. 5. Gynaecium × 5. 6. Androecium, 6*b* long filament of typical *O. imbricata* × 5. 7. Leaf of *O. imbricata* var. *violacea*, natural size. 8. Petal of same × 1½. (*Pillans* 6654). *Del.* T. M. Salter.

Caledon Division and extends to Bredasdorp Div., whereas *O. imbricata* has a more eastern distribution.

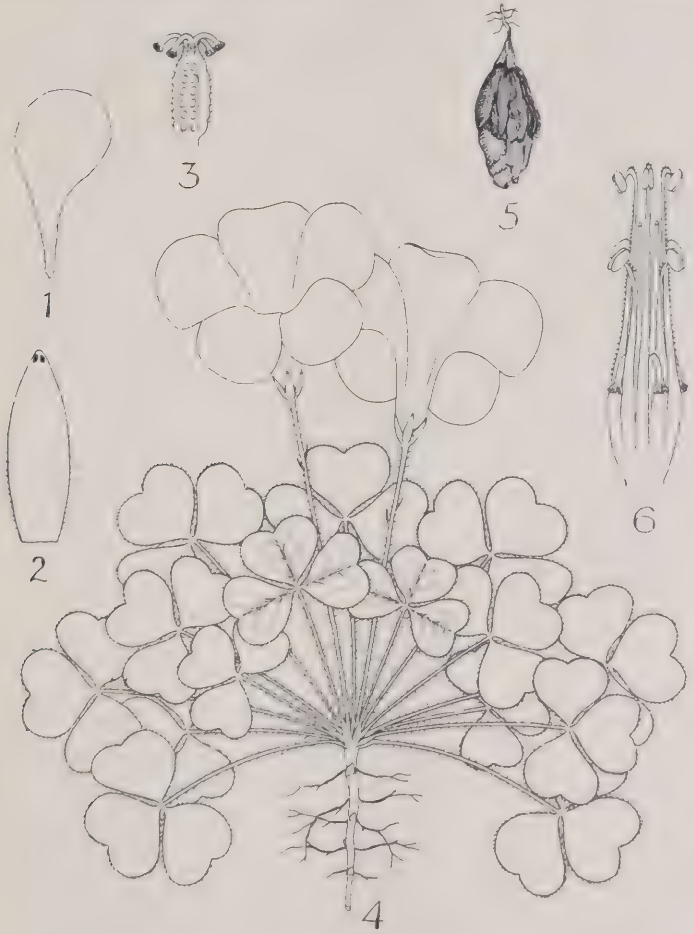


FIG. 2. *O. zeekoevleyensis* R. Knuth. 1. Petal, natural size. 2. Sepal × 6. 3. Gynaecium × 6. 4. Plant, natural size. 5. Bulb, natural size. 6. Androecium × 6. (*Salter* 1225.) *Del.* T. M. Salter.

O. zeekoevleyensis is exemplified by *Zey.* 2110, which is from Hartebeestrivier, Caledon, a specimen cited by Sonder as *O. imbricata* (typica), and there seems to have been some confusion of Zeyher's specimens, for

Zey. 2126 (the *type* of *O. imbricata*, var. *violacea*) is from Bushman's River, about 50 miles north-east of Uitenhage and not from Caledon as stated by Sonder. This error has evidently led to the belief that the Caledon plant (*O. zeekoevleyensis*) was *O. imbricata*, var. *violacea*.

O. imbricata, var. *violacea*, is exceedingly variable, with many local forms, some of which have a few glandular hairs. *O. riversdalensis* R. Knuth is identical with it and *O. georgica* Bolus f., though it has smaller flowers and rather less hairy leaves, merges into the other forms. *O. aganophila* Sond., in which Zeyher's specimens (*Zey.* 2127 ! in Herb. Sond.) appear to be etiolated, seems to be no more than a variety with pluricellular and glandular hairs and it is very much like *O. viscidula* Schlechter, a species which has unaccountably been sunk under *O. goniorhiza* E. & Z., (sub-series Lineares) by R. Knuth in Pflanzenreich. *O. aganophila* has been placed in the wrong section (Incarnatae) for, in spite of Sonder's assertion, it is not related to and not in the least like *O. incarnata* L.

The *type* of *O. zeekoevleyensis* (Schlechter 10548) is from near a not widely known farm, bearing the often recurring name of Zeekoevlei, about 10 miles south of Bredasdorp, a fact which came to light through studying Schlechter's itinerary. It was evidently dwarfed and flowering out of season and the salient characters which distinguish it from *O. imbricata* var. *violacea* are not given in its description.

The main differences between these two species are given in the following table :—

	O. imbricata E. & Z. var. *violacea*.	*O. zeekoevleyensis* R. Knuth.
Hairs.	Dense.	Sparse.
Bulb.	Elongate, lanceolate in outline.	Ovoid.
Tunics. ..	Wrinkled at base.	Smooth.
Bracts. ..	Opposite, set at an articulation on the peduncle.	Alternate.
Corolla. ..	Rosy-purple, with a darker throat.	Rosy-purple or lilaceous.
Longest filaments.	Not recurved at apex, teeth nearly 1 mm. long.	Recurved at apex, edentate.
Ovary chambers.	About 6-ovuled.	About 12-ovuled.